

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 3-5 stand withdrawn from consideration as being directed to non-elected subject matter.

Claims 1 and 2 have been canceled in favor of new claims 6-8. Support for the subject matter of the new claims is provided for example in the original claims, Figs. 9 and 10, and embodiment 2 of the invention described in the specification. (References herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Claims 1 and 2 were rejected, under 35 USC §103(a), as being unpatentable over Boudreau et al. ("Reference OFDM Physical Layer Configuration") in view of Hara et al. ("MC-CDM System for Packet Communications Using Frequency Scheduling"). To the extent these rejections may be deemed applicable to new claims 6-8, the Applicants respectfully traverse based on the points set forth below.

Claim 6 defines a base station apparatus that assigns, to a first block of frequencies, first data that is encoded and modulated according to received communication quality information and assigns, to a second block of frequencies, second data that is encoded and modulated according to a predetermined pattern. The first and second frequency blocks are then frequency hopped to communicate the first and second data. The claimed subject matter provides an advantage of supporting: (1) increasing the throughput of data using frequency scheduled transmissions on propagation paths known to have high quality and (2) transmitting data with

more conservative encoding and modulation schemes for propagation paths whose quality is unknown (see specification page 7, lines 6-28).

The Office Action cites Boudreau for disclosing the application of frequency hopping (FH) to an OFDM system (see Office Action section 8, lines 4-6). Hara is cited in the Office Action for disclosing: (1) the reporting of a communication quality value, for each of a plurality of subcarrier groups, from a mobile station to a base station and (2) selecting a subcarrier group having high quality for use in transmitting data (see page 5, lines 2-8).

However, applying Hara's teaching to Boudreau's system so as to select a subcarrier group within an FH-OFDM scheme having a high reported quality for use in transmitting data is not the same as, or similar to, the subject matter recited in the Applicants' new claim 6 of assigning, to a first block of frequencies, first data that is encoded and modulated according to received communication quality information and assigning, to a second block of frequencies, second data that is encoded and modulated according to a predetermined pattern.

Accordingly, the Applicants respectfully submit that the teachings of Boudreau and Hara, considered individually or in combination, do not render obvious the subject matter defined by new claim 6. Independent claim 8 similarly recites the above-mentioned subject matter distinguishing apparatus claim 6 from the applied references, but with respect to a method. Therefore, allowance of claims 6 and 8 and dependent claim 7 is warranted.

To promote a better understanding of the patentable distinctions of the instant claimed subject matter over the applied references, the Applicants submit the following additional remarks.

In accordance with new claims 6 and 8, features of the present claimed invention include assigning one of a plurality of blocks to first data, the first data being encoded and modulated according to communication quality information from a communication terminal apparatus, according to the same communication quality information, and assigning one of the plurality of blocks to second data, the second data being encoded and modulated without regard to the communication quality information from the communication terminal apparatus, in accordance with a predetermined pattern without regard to the communication quality information.

As for the first data, communication quality information for coding and modulation is transmitted from a communication terminal apparatus, so that the above block assignment (i.e., frequency scheduling) is possible using the communication quality information as is. As for the second data, communication quality information for coding and modulation is not transmitted from a communication terminal apparatus and, consequently, when frequency scheduling is performed for the second data, new communication quality information needs to be transmitted from a communication terminal apparatus and this increases the overhead of communication quality information. Consequently, to improve the reception quality of the second data, which is encoded and modulated without regard to communication quality information from a communication terminal apparatus, at the communication terminal apparatus, block assignment in accordance with a predetermined pattern that does not depend upon communication quality information is more suitable than frequency scheduling that is carried out according to communication quality information.

Therefore, according to the Applicants' claimed invention, focusing upon the difference between the first data and the second data, when the first data and the second data are transmitted

at the same time in the multicarrier communication band, to improve the quality of both the first data and the second data at a communication terminal apparatus, respective block assignments that are suitable to the first data and the second data are performed.

Boudreau discloses performing frequency hopping in a symbol rate in an FH-OFDM scheme. Hara discloses frequency scheduling, in which communication quality per segment comprised of a group of a plurality of orthogonal subcarriers is reported from each communication terminal to a base station apparatus and in which transmission is carried out by selecting a segment of good communication quality per communication terminal, for increased capacity and improved transmission characteristics.

However, Boudreau and Hara both fail to disclose or suggest the above-noted feature of the Applicants' claimed invention of performing respective block assignments that are suitable to the first and the second data when the first data and the second data are transmitted at the same time in the multicarrier communication band. Moreover, Boudreau and Hara both fail to disclose or suggest the above-noted feature of the Applicants' claimed invention of assigning one of a plurality of blocks to first data, the first data being encoded and modulated according to communication quality information from the communication terminal apparatus, according to the same communication quality information, and assigning one of the plurality of blocks to second data, the second data being encoded and modulated without regard to the communication quality information from the communication terminal apparatus, in accordance with a predetermined pattern without regard to the communication quality information.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

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